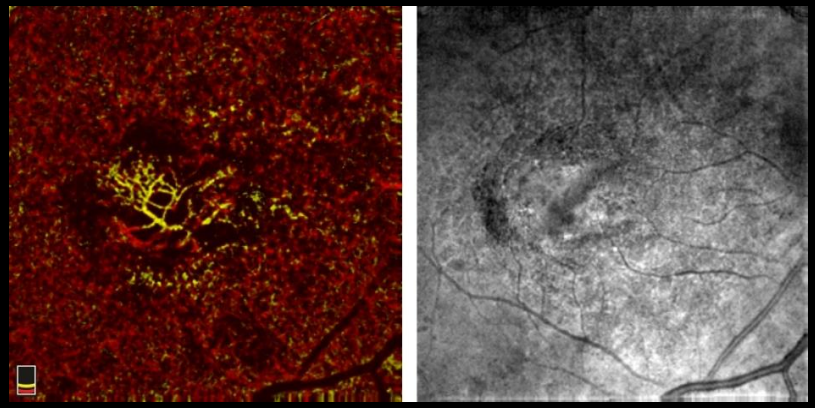
ASL Roma 1
PRESIDIO TERRITORIALE NUOVO REGINA MARGHERITA
AMBULATORIO PATOLOGIE RETINICHE
Resp. Dott.ssa SUSANNA CATALANO

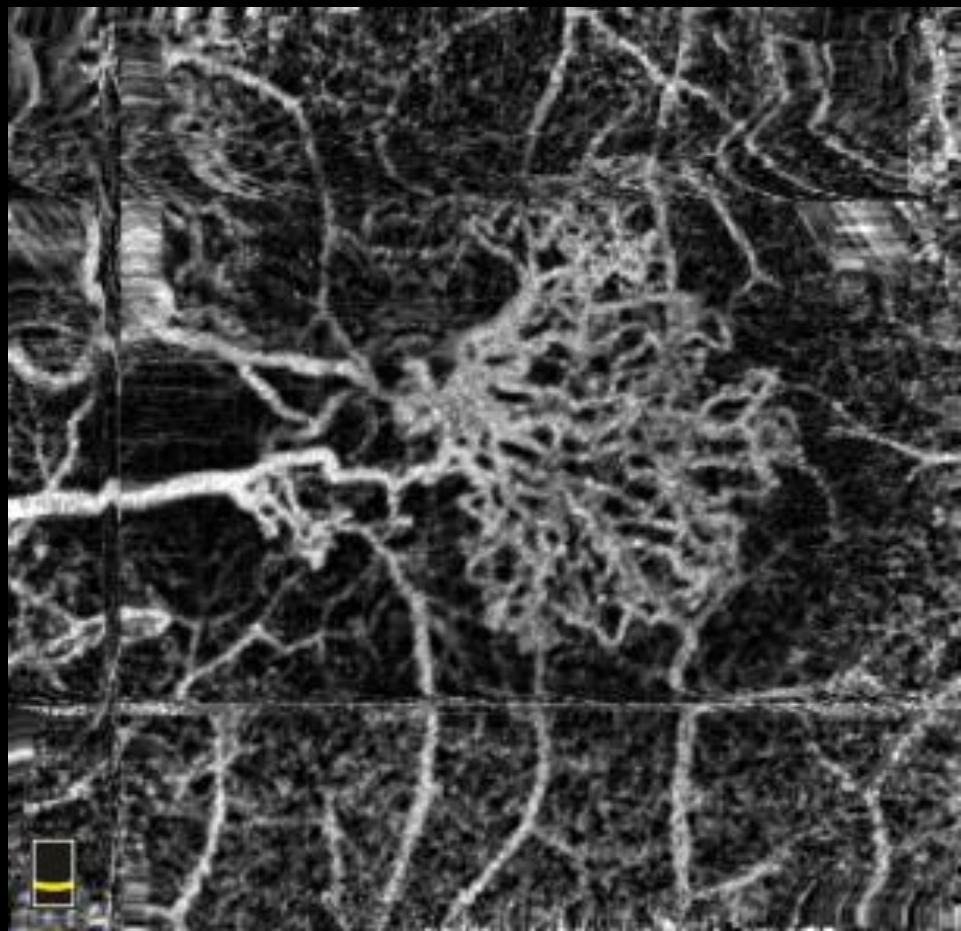
CENTRO ITALIANO
MACULA

OCT+OCTA: c'è ancora un ruolo per FAG e ICG?

Marco Rispoli

Rome





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Disclosures: Optovue Consultant

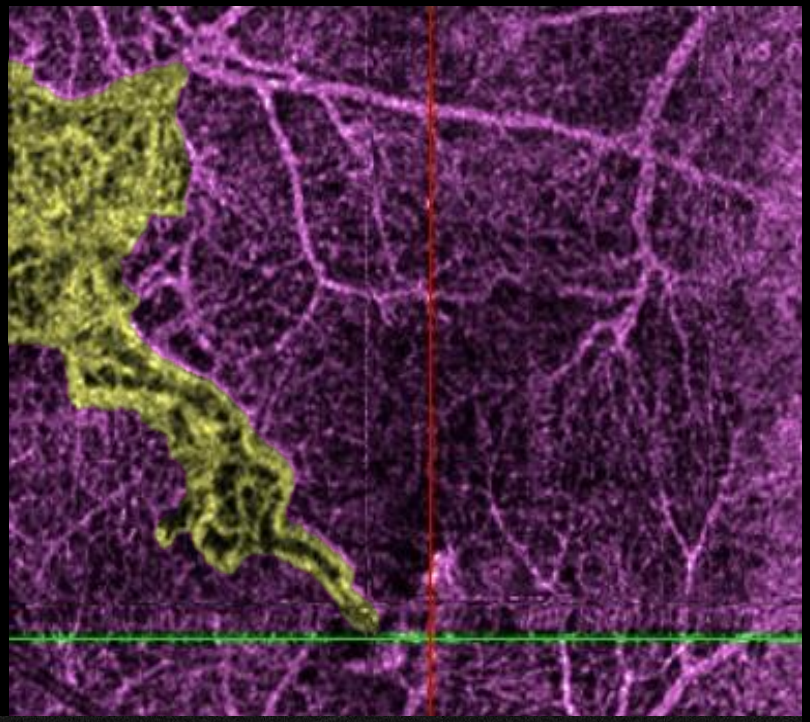
Features added on traditional FA

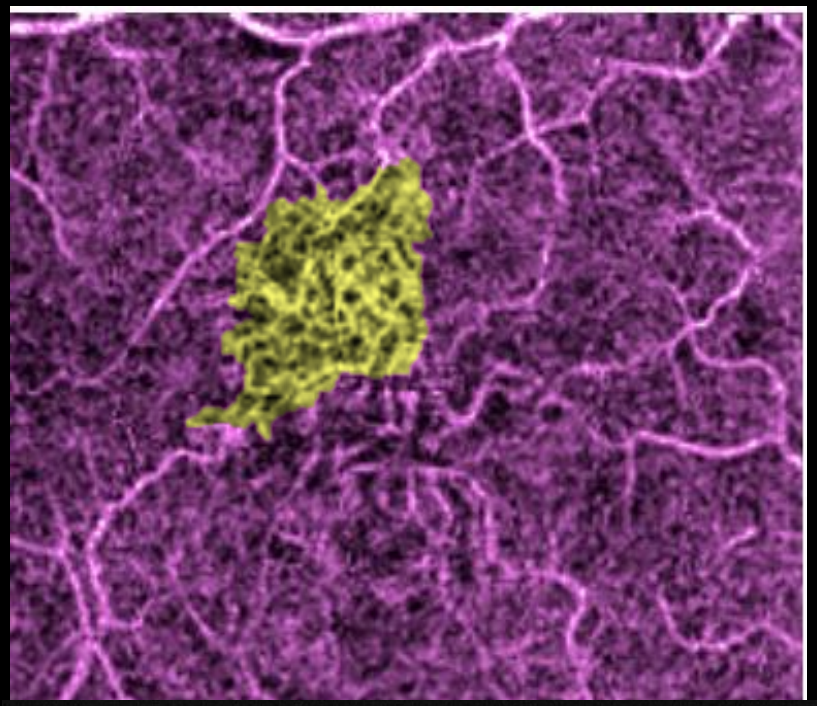
- OCT Angiography allows early diagnosis and classification of CNV
- OCT Angiography allows a very close follow up
- Non invasive
- No leakage masking
- Repeatable
- Fast
- Qualitative analysis
- Quantitative analysis

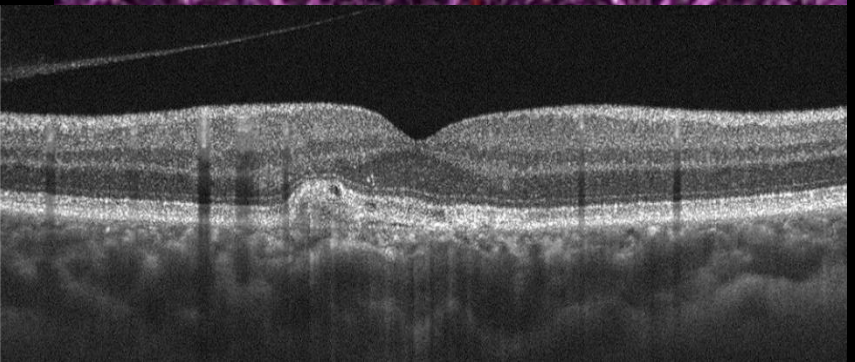
CNV Classification based on location:

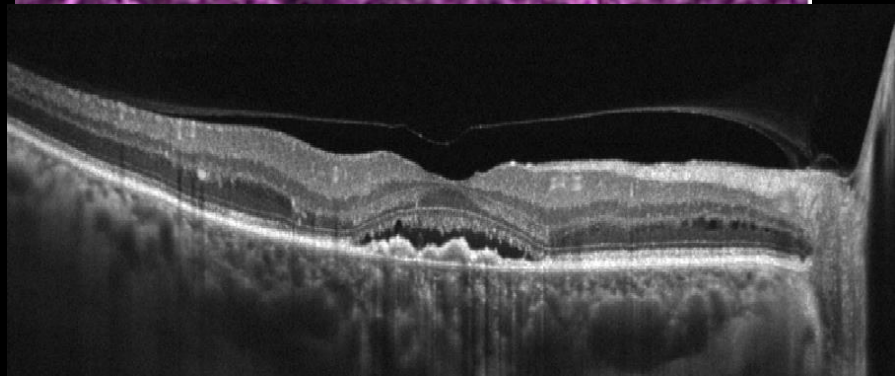
- Type 1: below RPE (Jung and Freund AJO 2014)
- Type 2: above RPE
- Type 3: intraretinal
- Type 4: mixed 1-2
- Filamentous (pachychoroid) NVs
- Myopic CNVs
- Residual flow in fibrosis

Type 1 CNV: below RPE, wider than type 2, avascular zone usually not involved

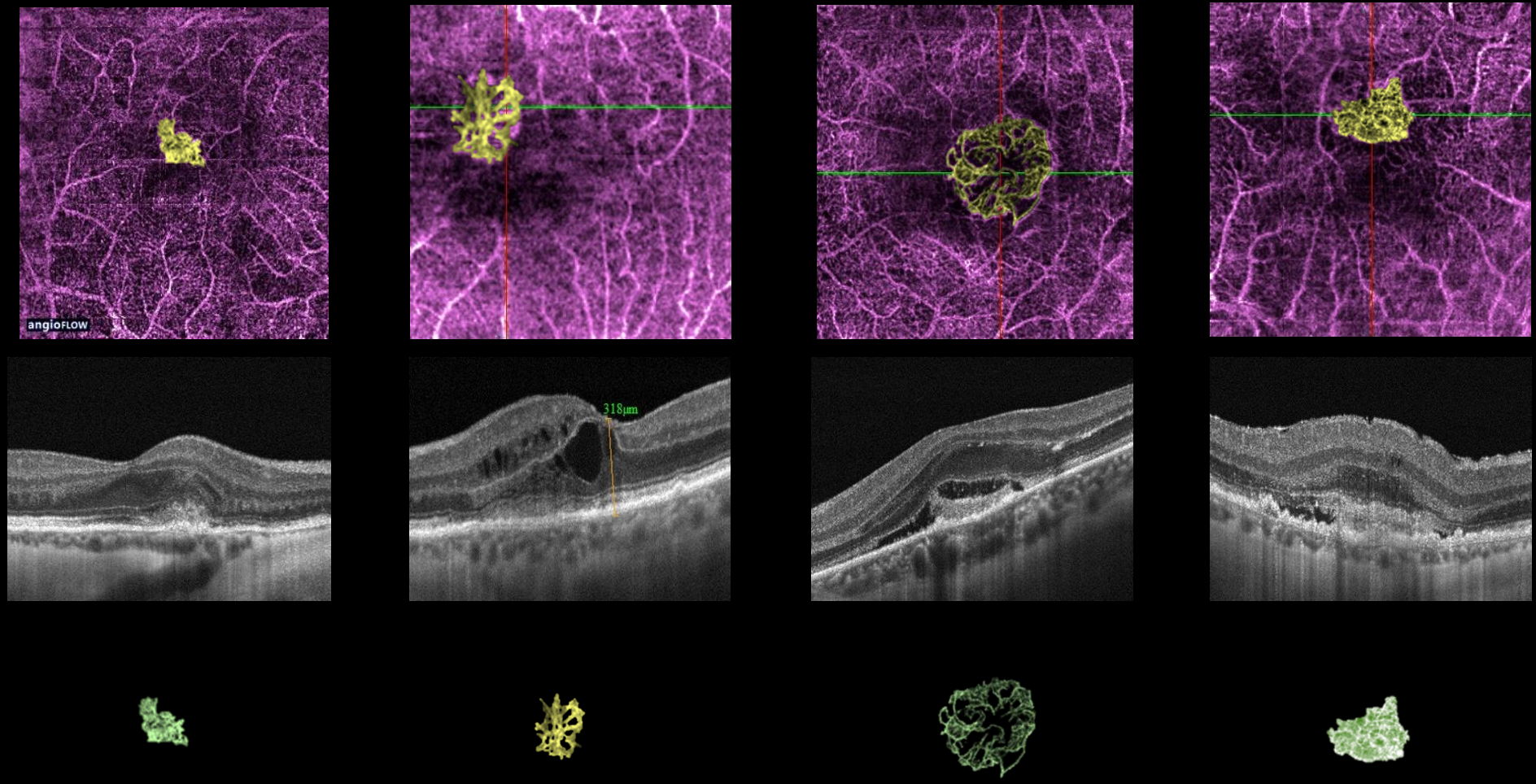




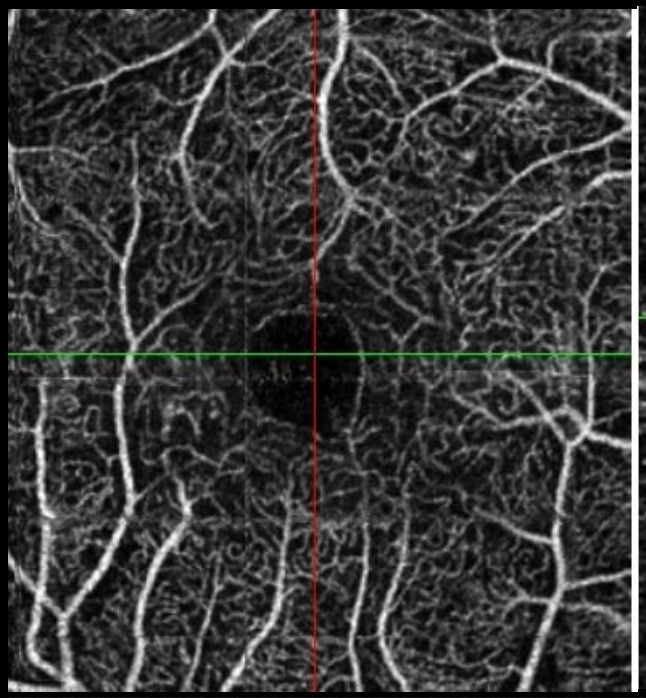


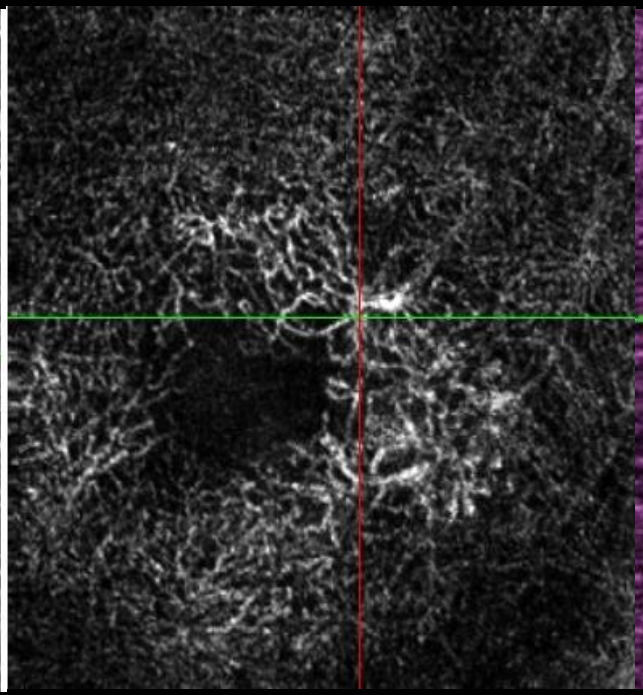


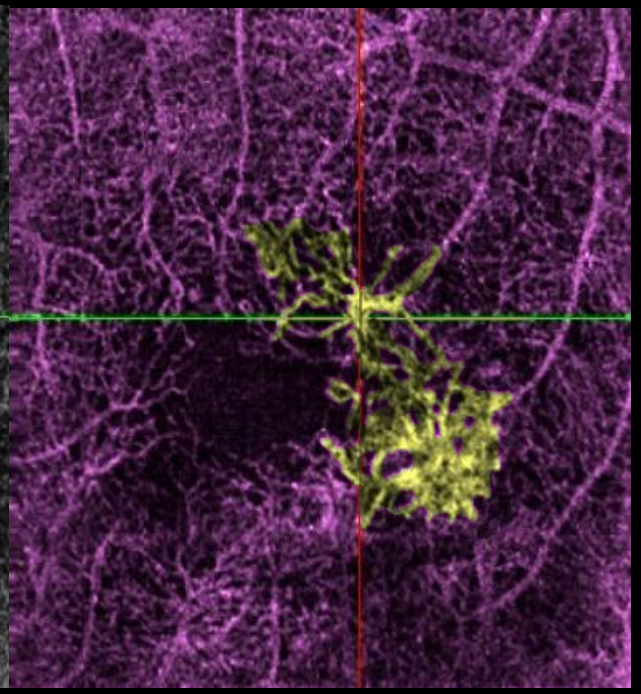
Type 2 CNV: above RPE, smaller than type 1, avascular zone always involved. Very heterogeneous shapes

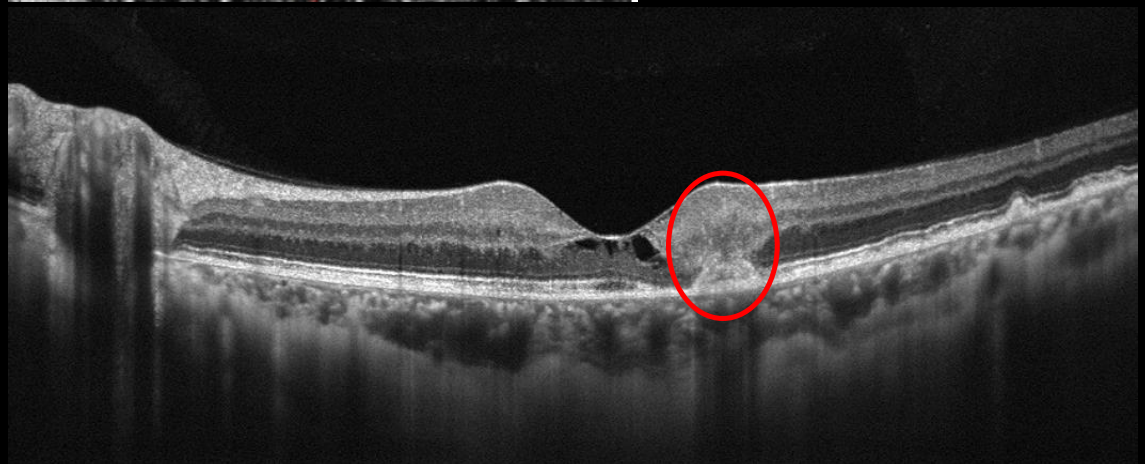


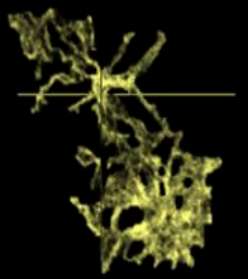
Type 3 NV: intraretinal anastomosis from the deep plexus going toward the RPE



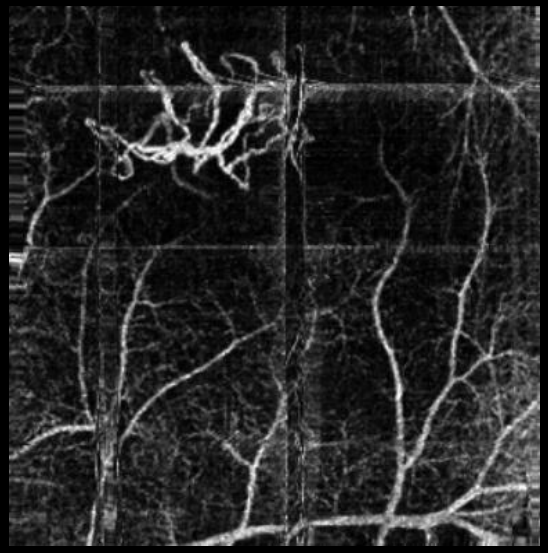


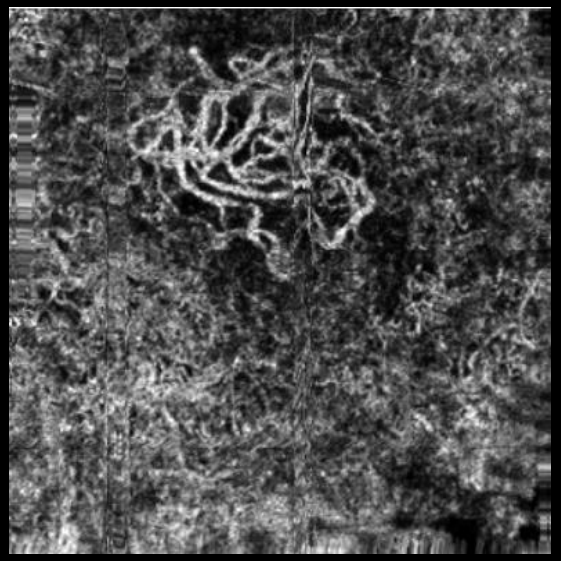


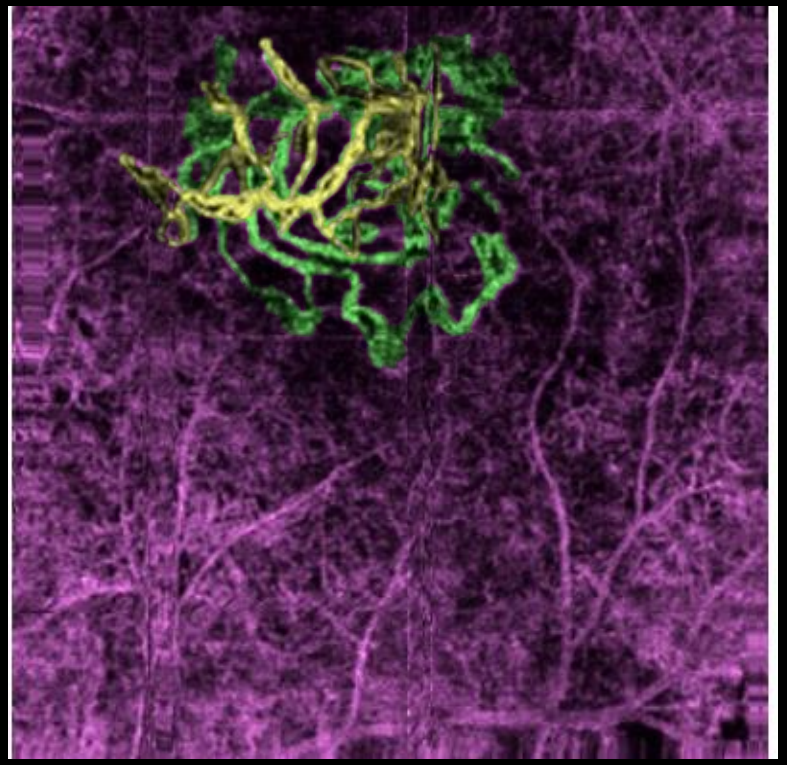


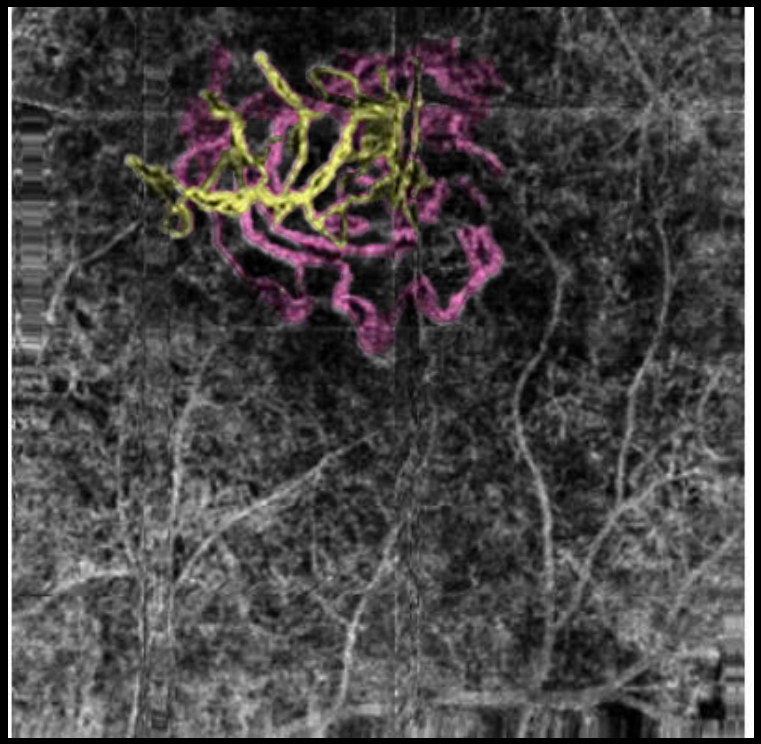


type 4 CNV : initially located below the RPE, NV spread out into the outer retina

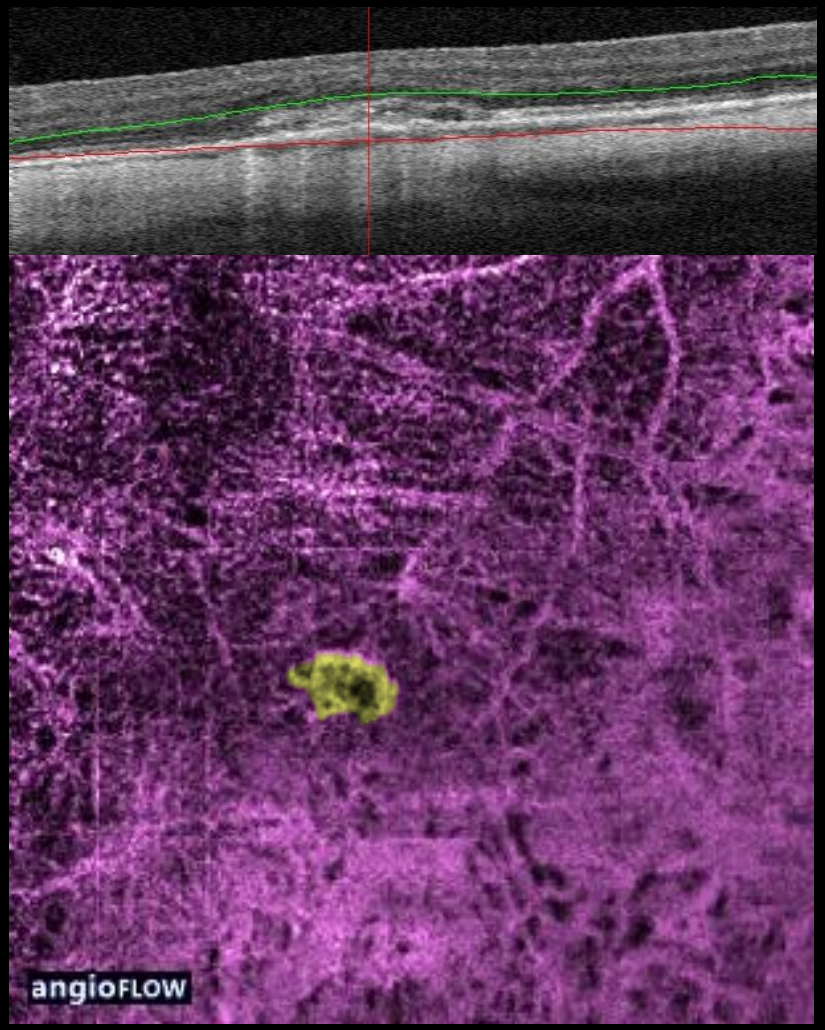


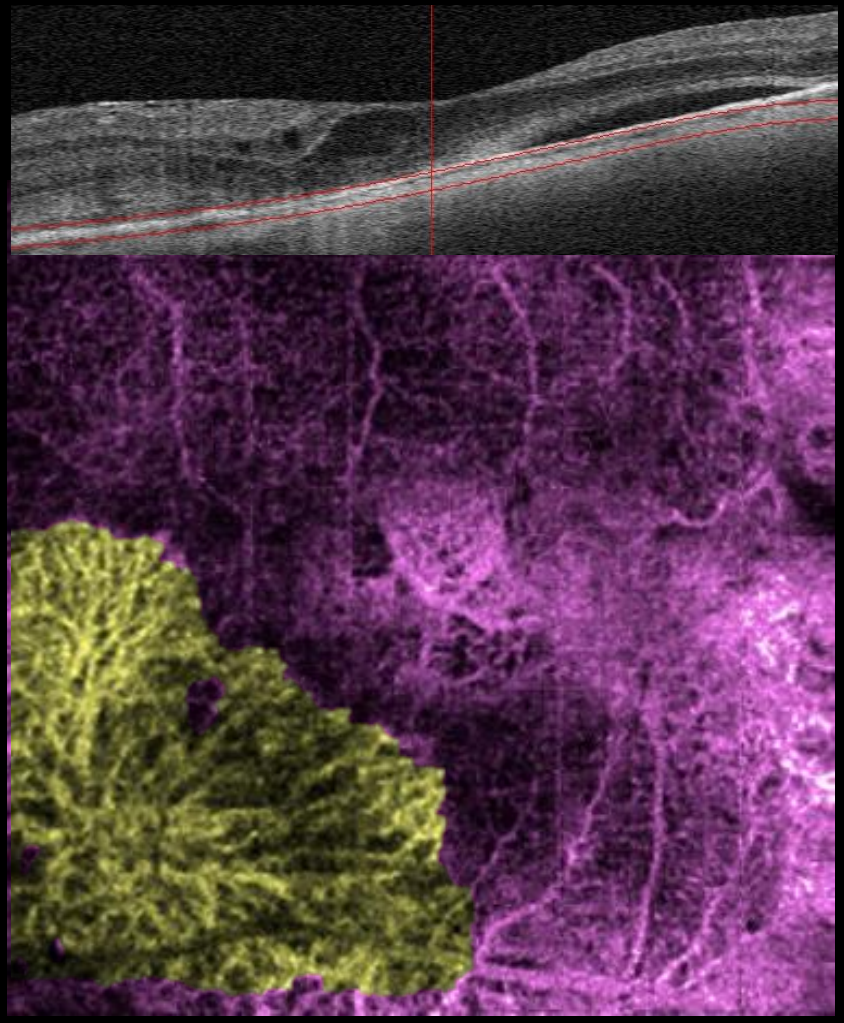






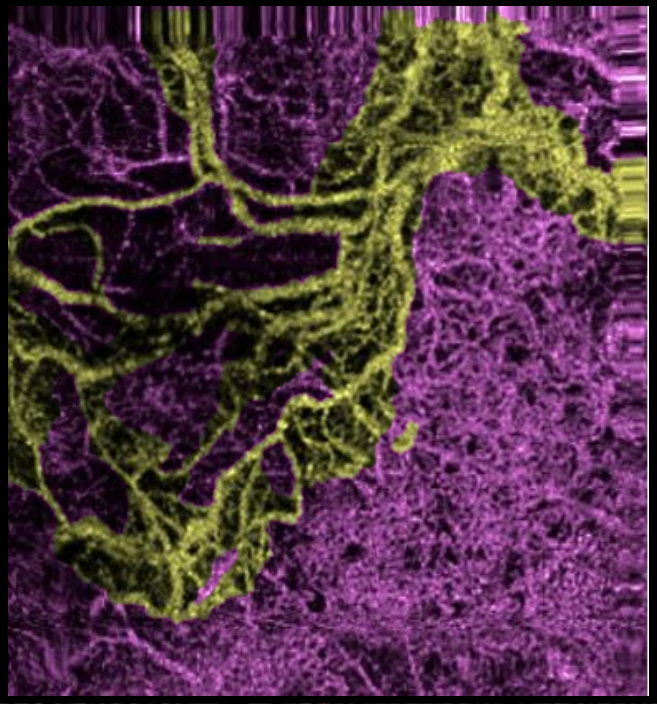
Myopic CNV: start above the RPE and penetrate into avascular zone, usually small size, even if they can get to be much bigger

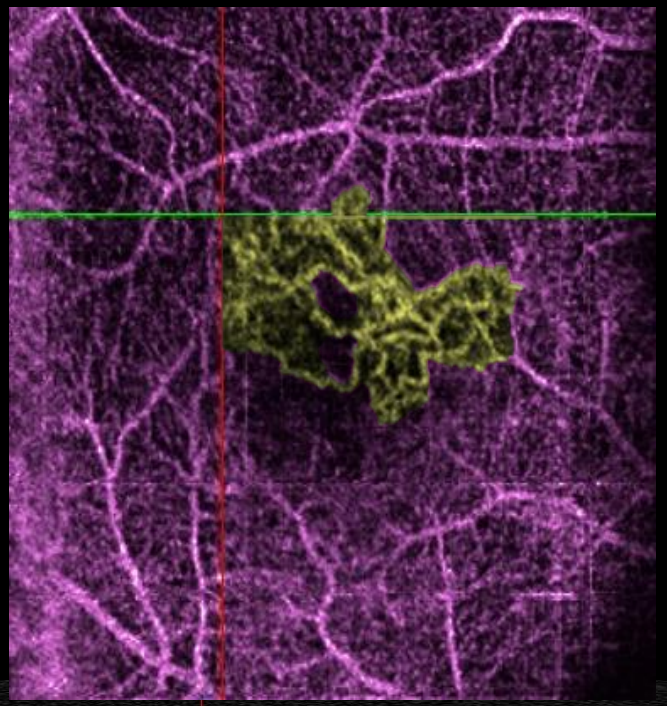


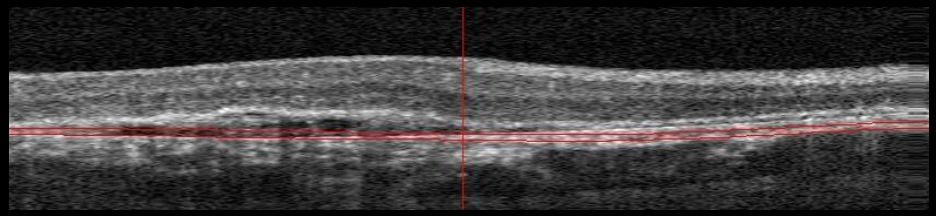


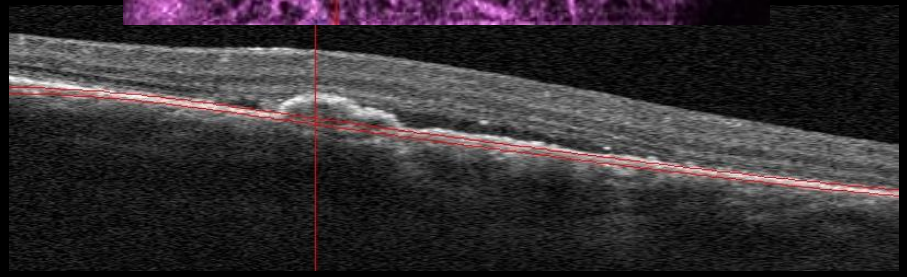
Pachychoroid CNV:

type 1 location, normally large size, no loops, filamentary, tangled

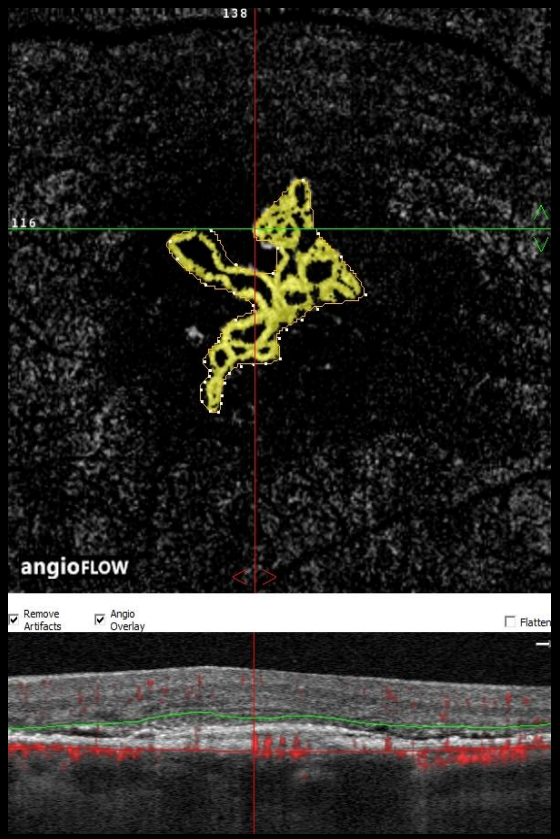


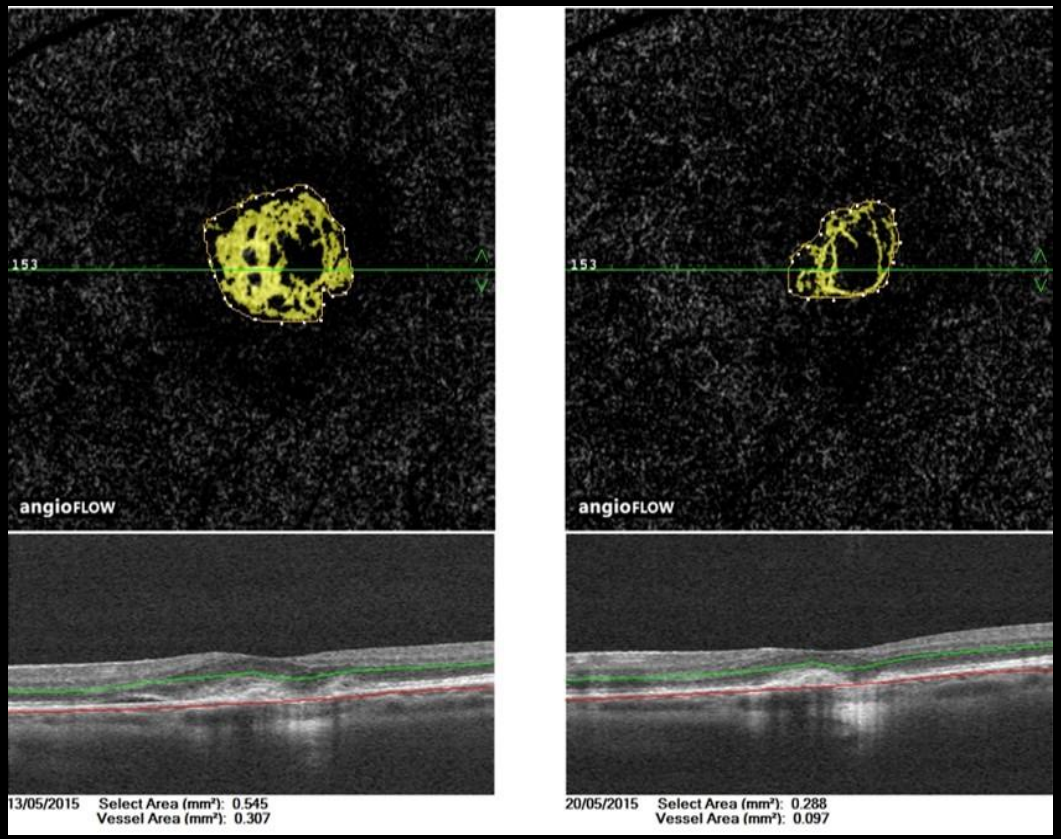






Flow analysis:
area quantification and follow up





OCT Angiography

Combination of functional and quantitative analysis allow to find the CNV recurrence even two weeks before structural alterations (fluid accumulation, cystic spaces).

We will show two CNV clinical cases followed by OCT Angiography for 19 up to 27 months.

Patients were treated with loading phase, then injected by PRN strategy.

Case 1: VDM

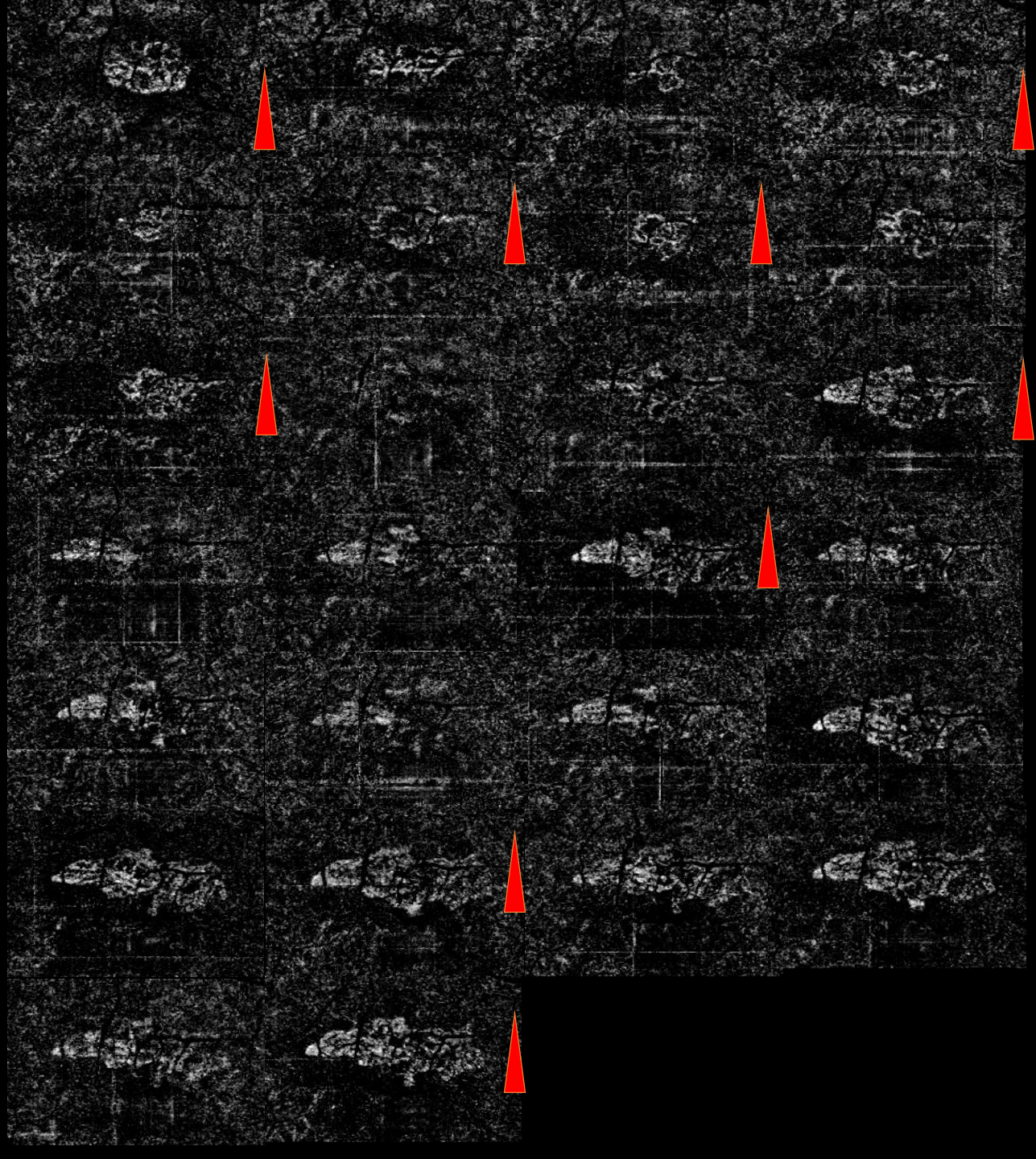
Female, 73 yo

Right eye -2sf

VA 0.6

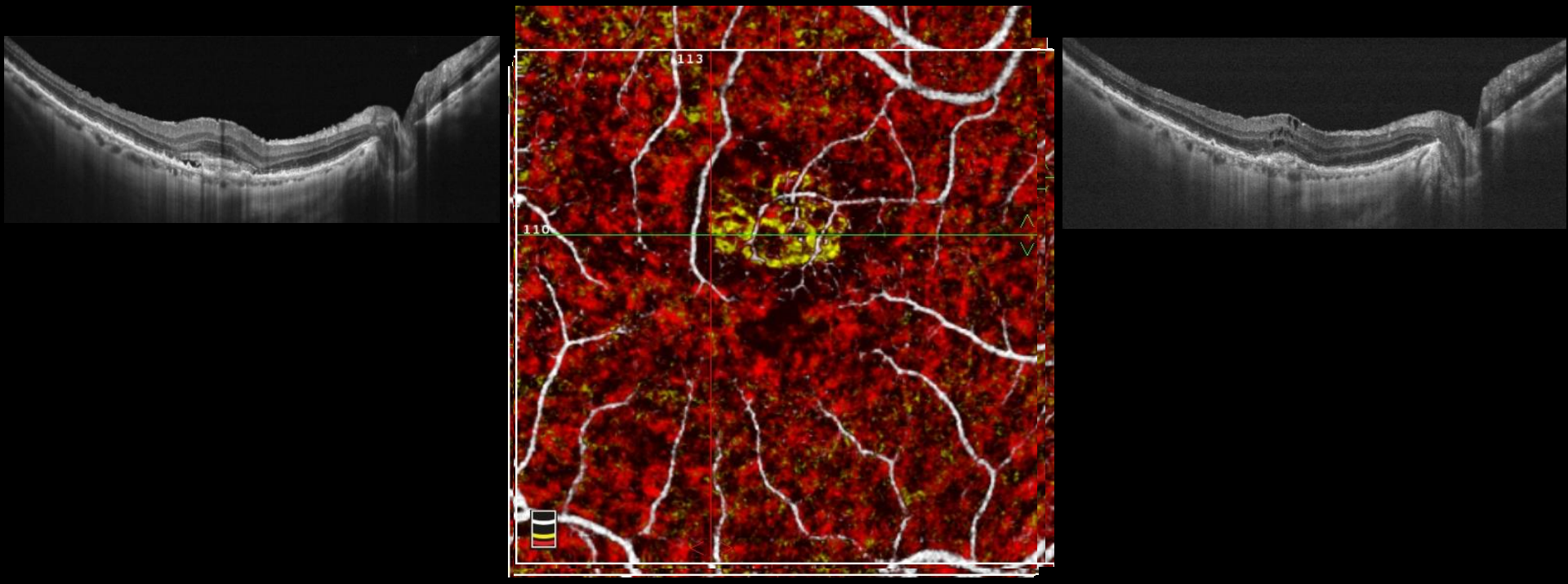
8 injections (4 ranibizumab and 4 aflibercept)

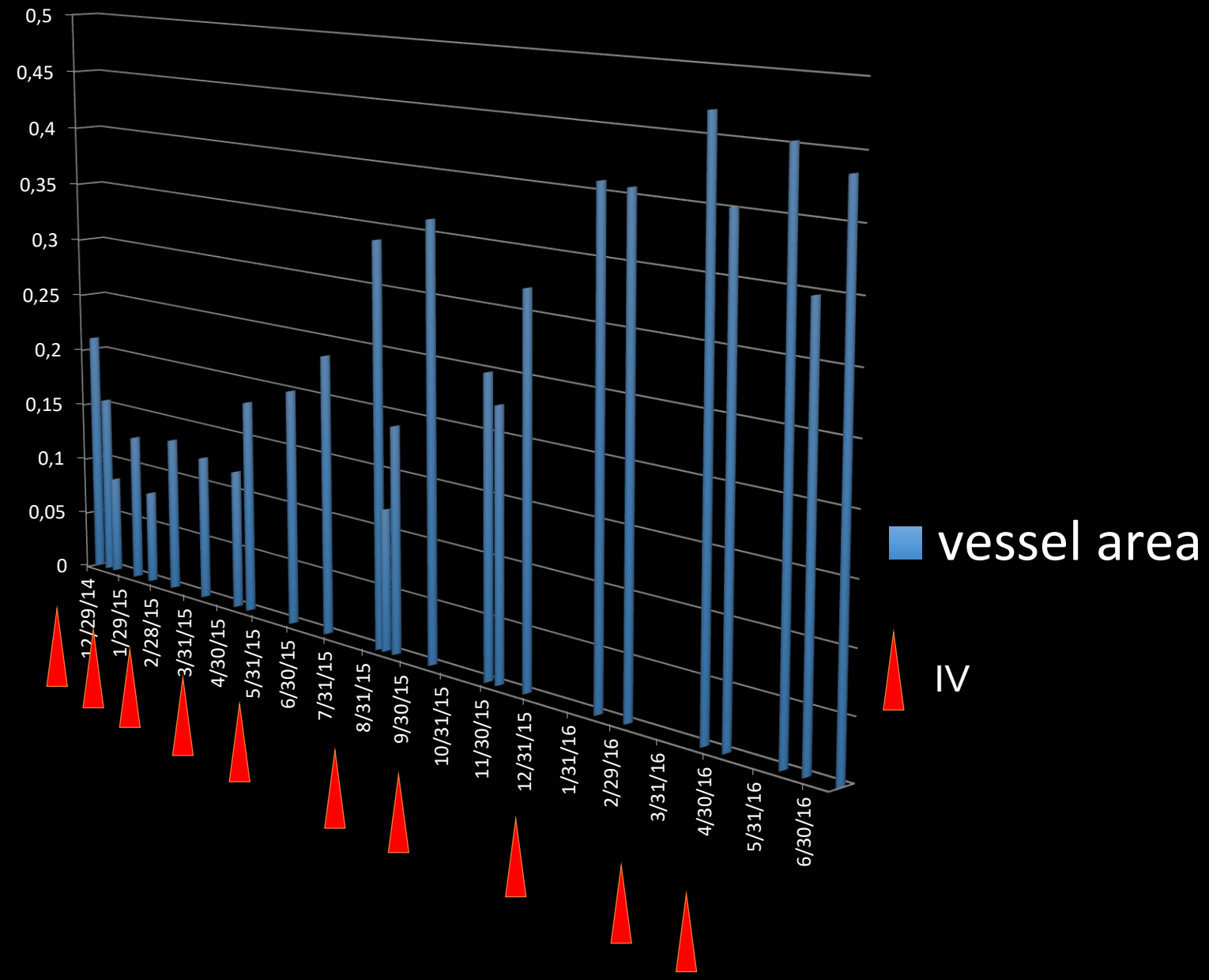
19 months follow up



Time lapse: overall evolution

Enhanced CNV: Time evolution

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12/31/15
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3/31/16
4/30/16
5/31/16
6/30/16
vessel area
IV

Case 2: MB

- Female 62 yo
- Refraction +2sf
- VA 0,2
- CNV type1/2
- Follow up 27 months
- 15 aflibercept, 1 ranibizumab

Apr 14 2014
Apr 17 2014
Apr 24 2014
May 19 2014
May 22 2014
Jun 4 2014
Jul 2 2014
Jul 10 2014
Jul 16 2014
Jul 30 2014
Sep 1 2014
Sep 24 2014
Oct 30 2014
Dec 4 2014
Jan 4 2015
Jan 22 2015
Feb 16 2015
Mar 5 2015
Mar 30 2015
Apr 2 2015
Apr 8 2015
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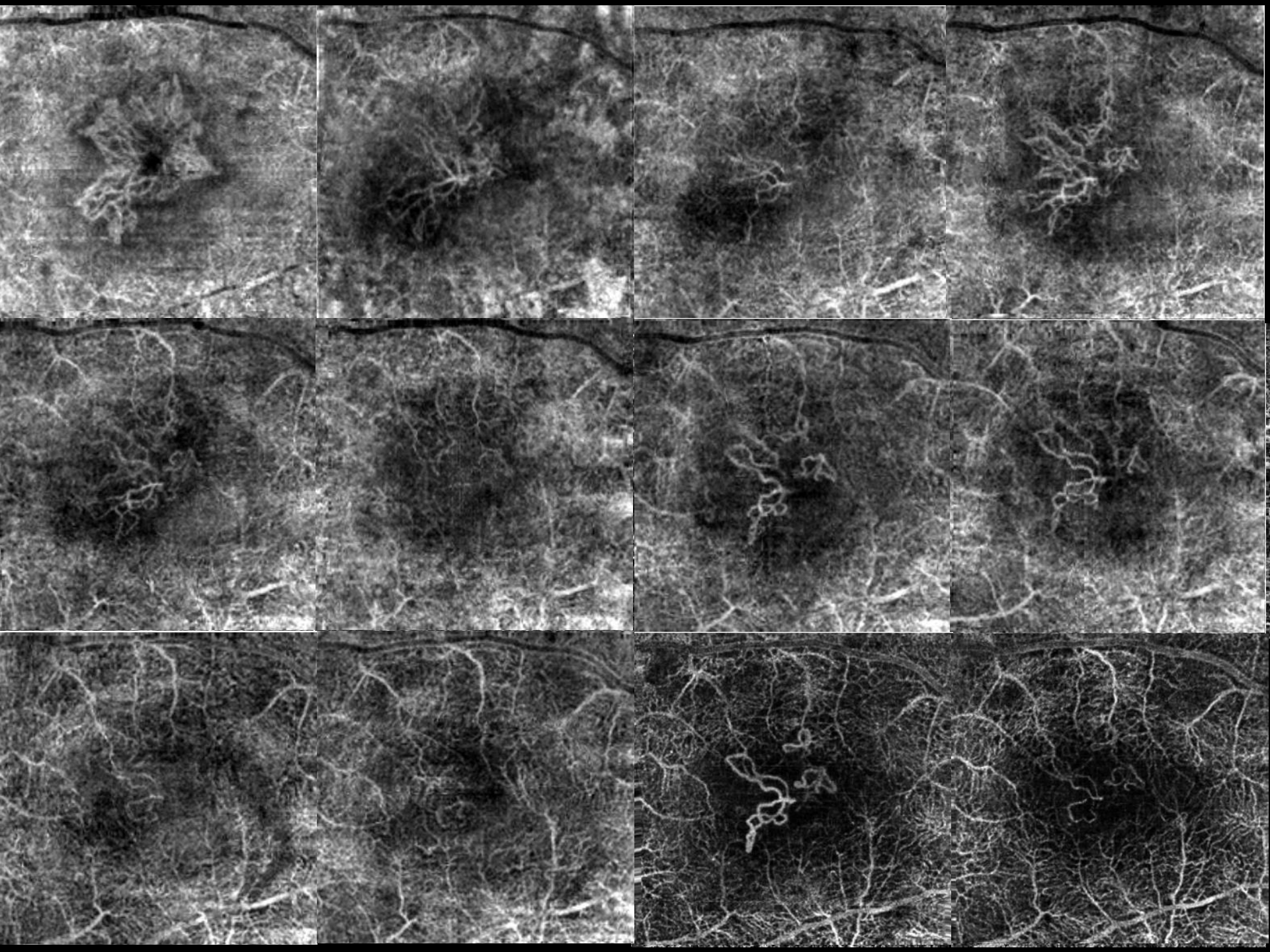
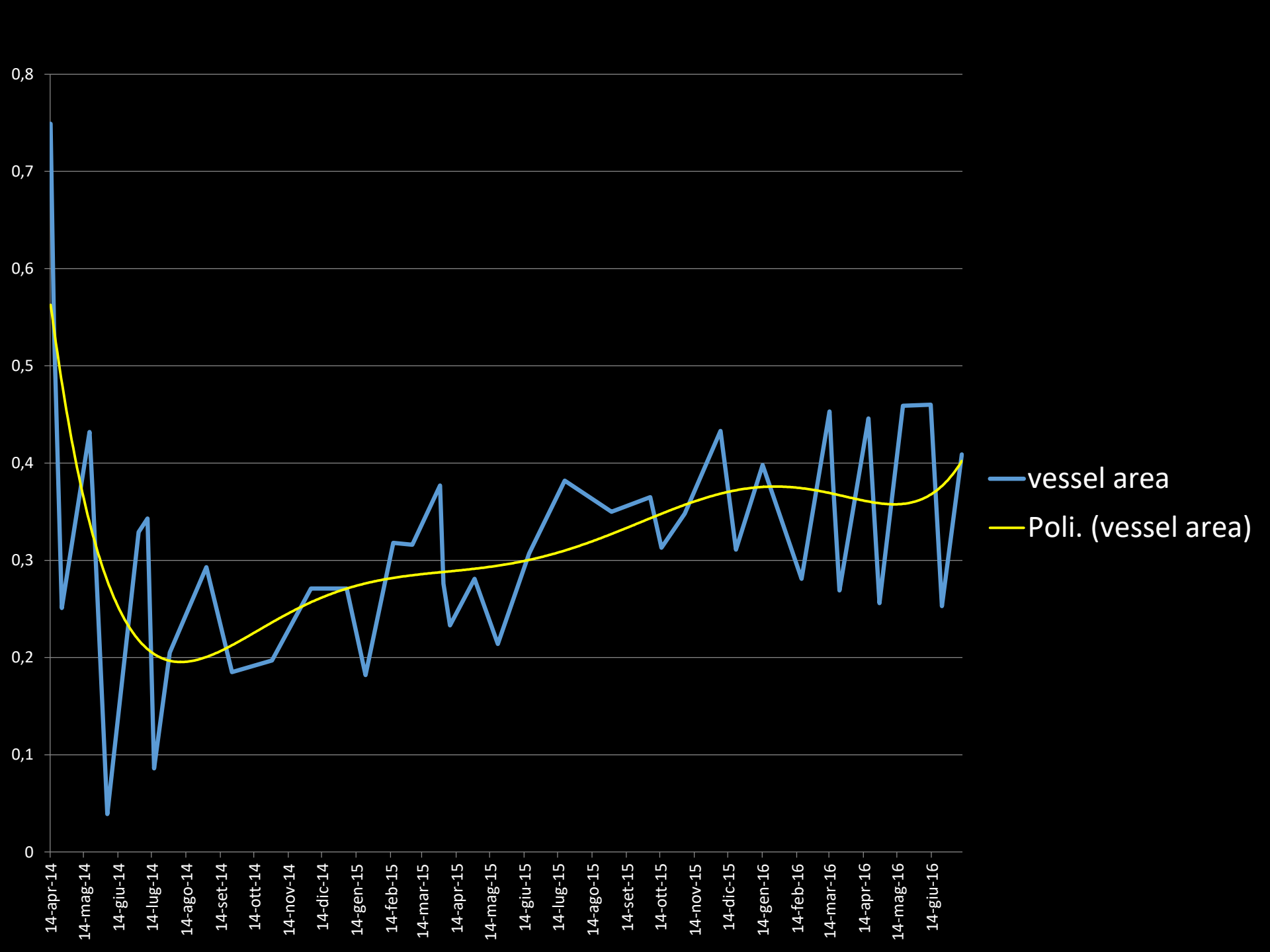
Oct 15 2015
Nov 5 2015
Dec 7 2015
Mar 14 2016
Apr 28 2016



Time lapse: overall evolution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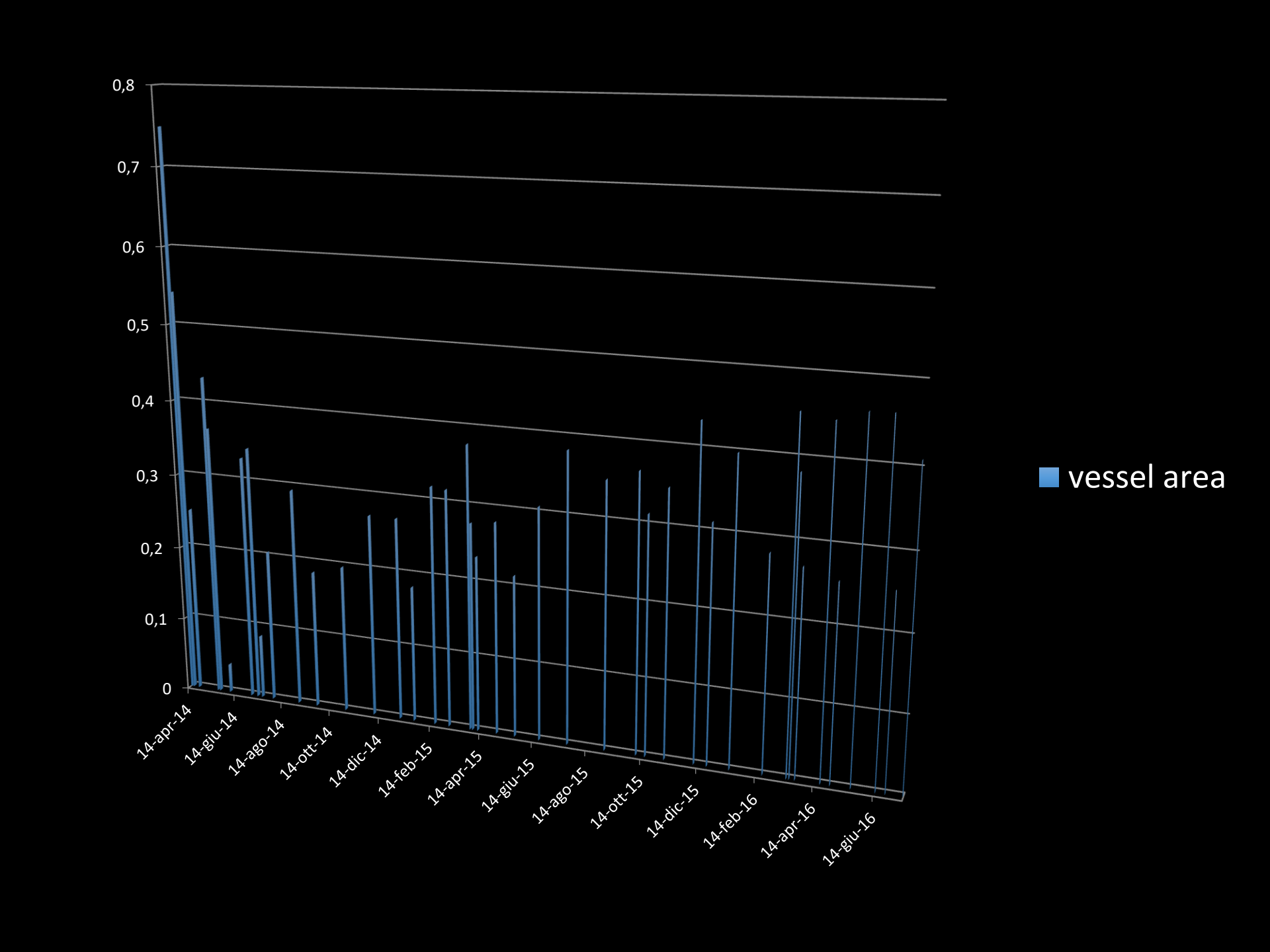
vessel area
Poli. (vessel area)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14-ott-14
14-dic-14
14-feb-15
14-apr-15
14-giu-15
14-ago-15
14-ott-15
14-dic-15
14-feb-16
14-apr-16
14-giu-16
vessel area

Conclusions

- CNV start decreasing its activity by 24 hours after IV
- Maximum decrease is between the 7° and the 12° day after IV
- CNV reopens after 25-35 days from the last IV
- OCT-A shows “mature” NVs evolution that are less responsive to anti VEGF
- OCT-A allows to locate and anticipate recurrences
- Time lapse examination gives useful data about recurrences

Conclusions

- OCTA introduces new concepts in CNV classification and evolution
- OCTA allows a clearer vision of the capillary network
- OCTA allows a very close follow up managing CNV treatment

Thank you